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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL ENVIRONMENTAL SATELLITE, DATA,
AND INFORMATION SERVICES
MUNDT FEDERAL BUILDING
SIOUX FALLS, SOUTH DAKOTA 57198

IC 7-208

July 25, 1985 E/SP4:HW

MEMORANDUM

TO: Allen H. Watkins
Chief, EROS Data Center

FROM: Howard W. Warriner
Production Program Manager

SUBJECT: Repositioning of TDRS-A

The attached memorandum is provided for your information.

Attachment

Action	
Info	
Watkins	✓
Landis	
Metz	✓
Byrnes	
Rohde	✓
Admin.	
DP&DB	✓
CSB	✓
TD&AB	
Pellinger	
Alaska	
Technicolor	
NOAA	

(distributed 7-30-85)

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MEMORANDUM

TO: The Record

FROM: Howard W. Warriner
Production Program Manager

SUBJECT: Repositioning of TDRS-A

Howard Sparks requested a brief customer impact assessment on projected Landsat sales if TDRS-A were moved from 41°W to 65°W. He indicated that the move was being considered during October or November of 1985. TDRS-A would then remain at 65°W. He said that NASA indicated that the launch for TDRS-B is scheduled for January 1986, and it would be positioned at 171°W, as originally planned. I understood that the launch for TDRS-C is planned for April/May 1986, and it would be stationed at 41°W. Therefore, the originally planned TDRS coverage pattern would be restored. Howard Sparks also indicated that moving TDRS-A to 53/54°W was an alternative.

With the following assumptions:

1. At 41°W, we can obtain all of path 154, and portions of 153 at higher latitudes.

2. 233 paths divided by 360° = 0.647 paths/degree.

I conclude:

1. That the proposed location of 65°W results in:

   a. 65°W - 41°W = 24° and

   b. 24° x 0.647 paths/degree = 15.5 paths.

   c. Path 154 + 16 paths = path 170,

   d. Path 170 crosses the equator at about 34° and 17'E and;

2. that the proposed location of 53°W results in:

   a. 53°W - 41°W = 12° and

   b. 12° x 0.647 paths/degree = 7.8 paths.

   c. Path 154 + 8 paths = path 162;

   d. Path 162 crosses the equator at about 46° and 39'E.

The move to 65°W precludes TDRS coverage of most of the middle east. Cursory review of Attachment 1, Landsat Receiving Stations Coverage, indicates that no ground station coverage exists of the middle east.

The increase of the TDRS zone of exclusion (see Figure 6.7, Fourth Phase, Data Communication Network, extracted for the Landsat 4 Data Users Handbook (Attachment 2) is roughly depicted for 61°W in Attachment 3. The zone of exclusion for 53°W is roughly depicted in Attachment 4.

My input to Mr. Sparks was that with known customer requirements through October and November 1985, 61°W was unacceptable. 53°W was more reasonable; i.e., possible loss of revenue of some 50 scenes during October and November. 53°W also accommodated portions of other known customer requirements during the spring and summer of 1986.

I recommend that TDRS-A not be moved to 61°W. If it must be moved, then 53°W would be more acceptable in accommodating customer requirements known at this time.

Attachments

cc: G. Nelson
H. Sparks
K. Gores

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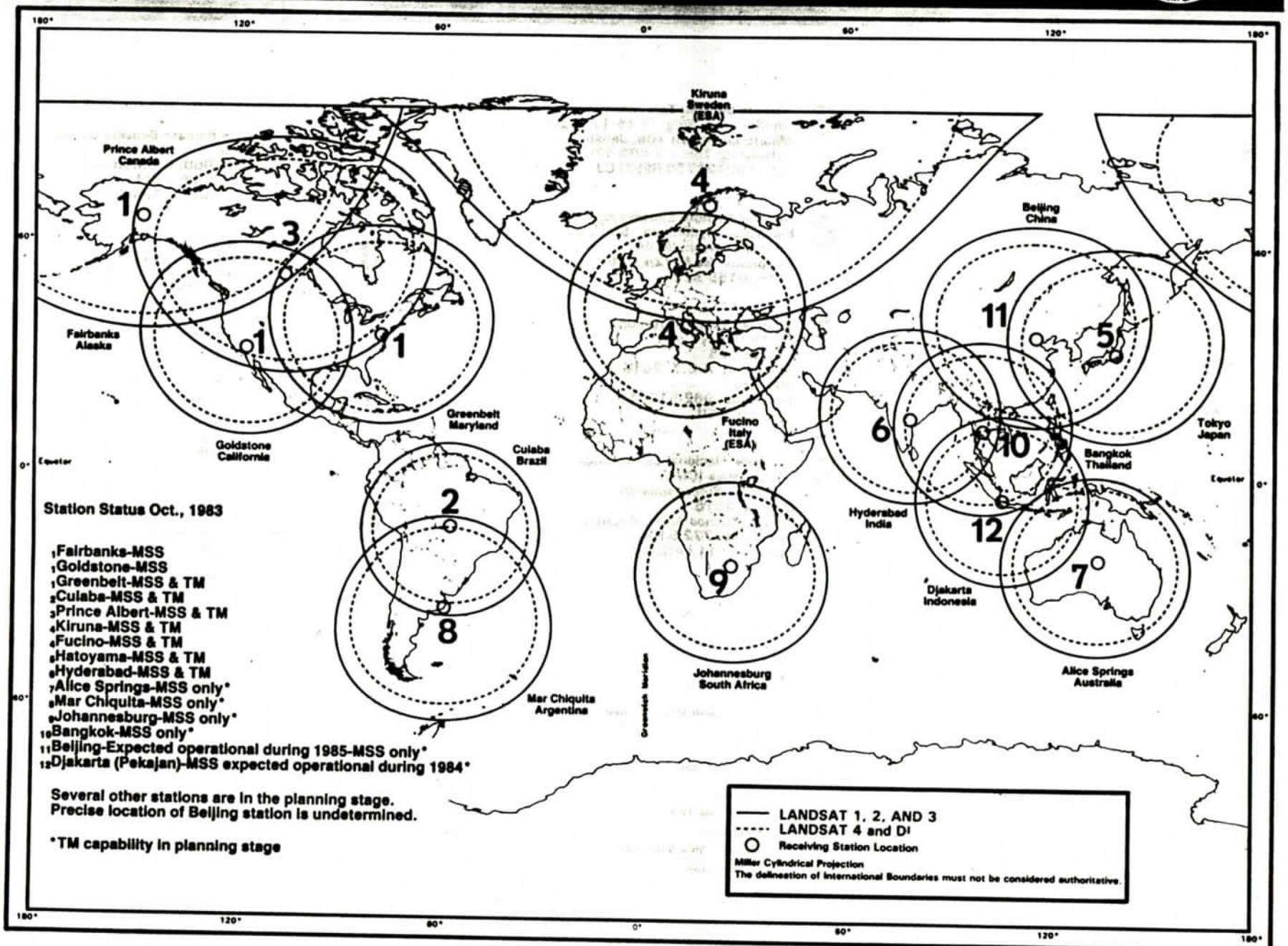
NOAA/NESDIS



LANDSAT RECEIVING STATION COVERAGE

Attachment 1

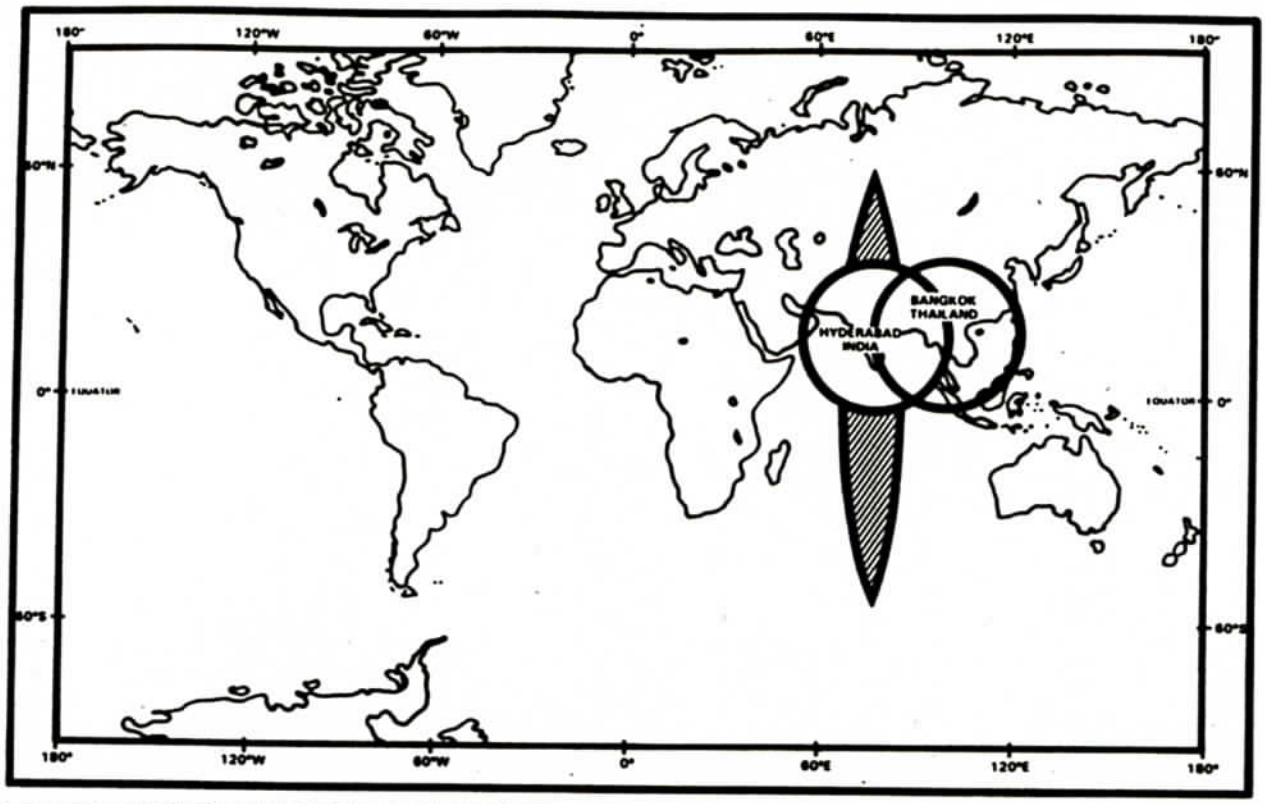


Figure 6.7 FOURTH PHASE, DATA COMMUNICATION NETWORK (shaded areas not covered)

Attachment 2

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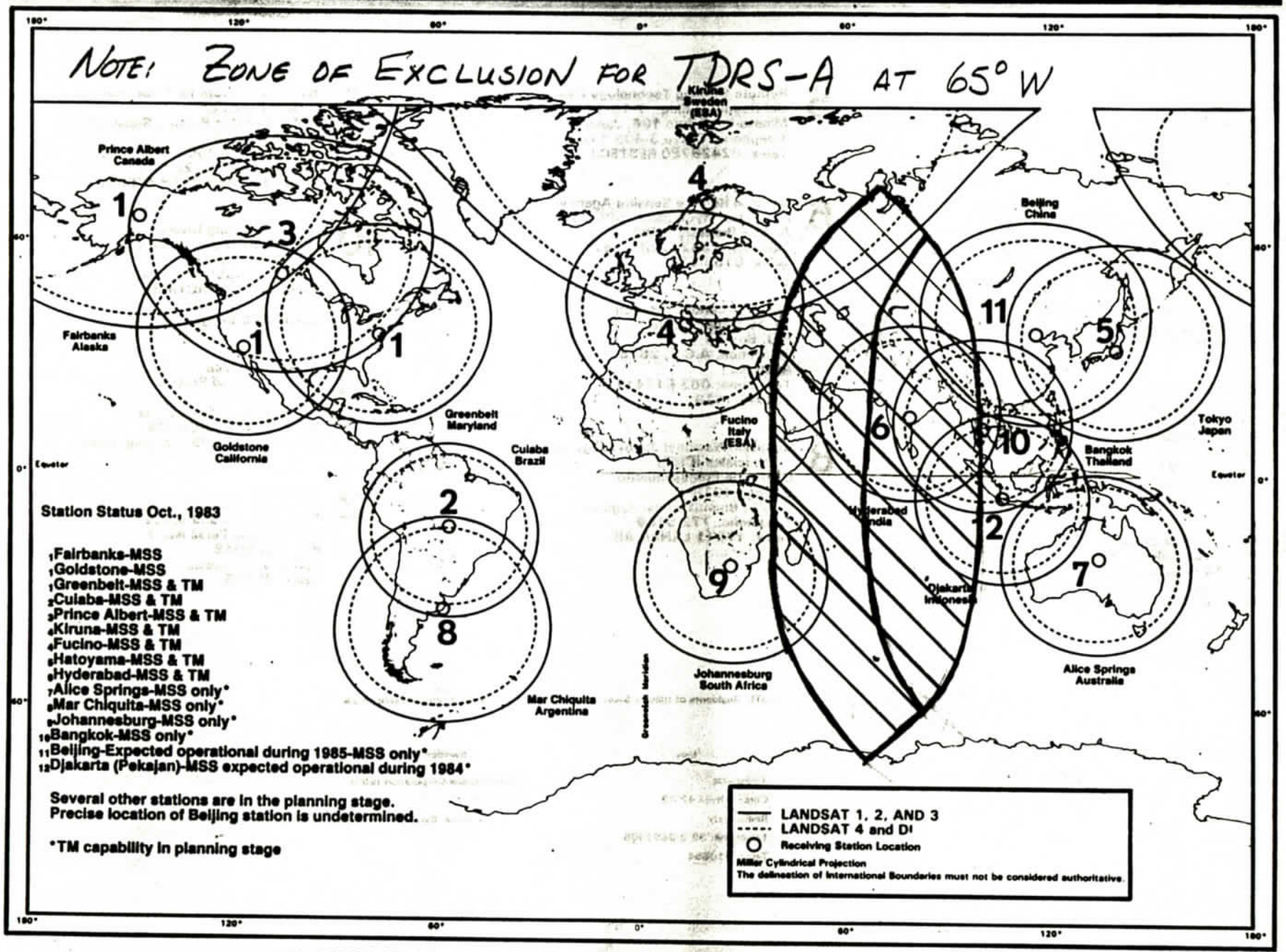

LANDSAT RECEIVING STATION COVERAGE

Attachment 3

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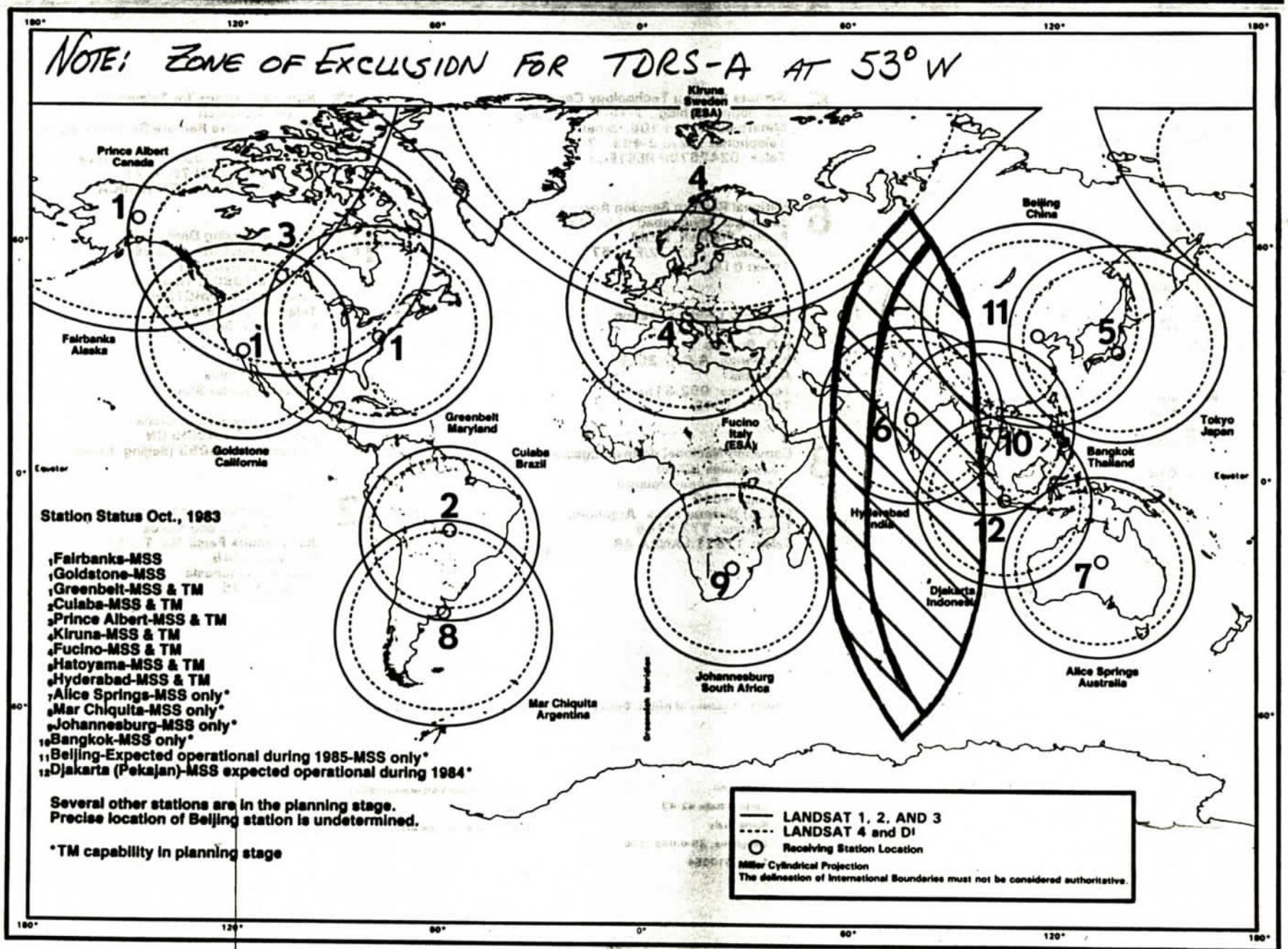

LANDSAT RECEIVING STATION COVERAGE